

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of :  
Samuel I. STUPP et al. :  
Serial No. 10/534,097 : Group Art Unit: 1653  
Filed: November 8, 2005 : Examiner: Unknown

For: COMPOSITION AND METHOD FOR SELF-ASSEMBLY AND MINERALIZATION  
OF PEPTIDE AMPHIPHILES

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Honorable Commissioner for Patents  
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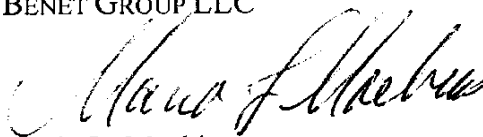
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This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No certification or fee is believed to be required.

Respectfully submitted,

BENET GROUP LLC

A handwritten signature in black ink, appearing to read "Maria L. Maebius", written in a cursive style.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	10534097
Filing Date	2005-11-08
First Named Inventor	Samuel I. STUPP et al.
Art Unit	1653
Examiner Name	Unknown
Attorney Docket Number	NANO 106 US2 (NU 22088)

**U.S. PATENTS**

Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5871767		1999-02-16	Dionne et al.	
	2	6156321		2000-12-05	Thorpe et al.	
	3	6265539	B1	2001-07-24	Arlinghaus	
	4	6270765	B1	2001-08-07	Deo et al.	
	5	6458924	B2	2002-10-01	Knudsen et al.	
	6	6548048	B1	2003-04-15	Cuthbertson et al.	
	7	6855329	B1	2005-02-15	Shakesheff et al.	

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**U.S. PATENT APPLICATION PUBLICATIONS**

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	1	20030092672	A1	2003-05-15	Darcy et al.	
	2	20050214257	A1	2005-09-29	Zhao et al.	

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**FOREIGN PATENT DOCUMENTS**

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1	99/36107	WO		1999-07-22	Shakesheff et al.		<input type="checkbox"/>

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**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1	Nomizu, Motoyoshi, Atsushi Utani, Norio Shiraishi, Maura C. Kibbey, Yoshihiko Yamada, and Peter P. Roller. July 15, 1992. "The All-D-Configuration Segment Containing the IKVAV Sequence of Laminin A Chain Has Similar Activities to the All-L-Peptide in Vitro and in Vivo." The Journal of Biological Chemistry. Vol. 267, No. 20, pp. 14118-14121.	<input type="checkbox"/>
	2	Margomenou-Leonidopoulou, G. 1994. "Thermotropic Mesophases of Ionic Amphiphiles. II. Ionic Amphiphiles in Aqueous Media." Journal of Thermal Analysis. Vol. 42, pp. 1041-1061.	<input type="checkbox"/>
	3	Rappolt, Michael and Gert Rapp. 1996. "Structure of the Stable and Metastable Ripple Phase of Dipalmitoylphosphatidylcholine." Eur. Biophys. J. Vol. 24, pp. 381-386.	<input type="checkbox"/>

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4	Goveas, J. L. and S. T. Milner. 1997. "Dynamics of the Lamellar—Cylindrical Transition in Weakly Segregated Diblock Copolymer Melts." <i>Macromolecules</i> . Vol. 30, No. 9, pp. 2605-2612.	<input type="checkbox"/>
5	Munson, John B. and Stephen B. McMahon. 1997. "Effects of GDNF on Axotomized Sensory and Motor Neurons in Adult Rats." <i>European Journal of Neuroscience</i> . Vol. 9, pp. 1126-1129.	<input type="checkbox"/>
6	Fernandez, A., M. A. Alsina, I. Haro, R. Galantai, and F. Reig. 1998. "Synthesis and Physicochemical Characterization of Cyclic Laminin Related Peptides." <i>Langmuir</i> . Vol. 14, No. 13, pp. 3625-3630.	<input type="checkbox"/>
7	Yagi, Nobuhiro, Yoshikatsu Ogawa, Masato Kodaka, Tomoko Okada, Takenori Tomohiro, Takeo Konakahara, and Hiroaki Okuno. 1999. "A Surface-Modified Functional Liposome Capable of Binding to Cell Membranes." <i>Chem. Commun.</i> Pp. 1687-1688.	<input type="checkbox"/>
8	Luo, Yi and Glenn D. Prestwich. 2001. "Novel Biomaterials for Drug Delivery." <i>Expert Opin. Ther. Patents</i> . Vol. 11, No. 9, pp. 1395-1410.	<input type="checkbox"/>
9	Marchi-Artzner, Valerie, Barbara Lorz, Ulrike Hellerer, Martin Kantelechner, Horst Kessler, and Erich Sackmann. 2001. "Selective Adhesion of Endothelial Cells to Artificial Membranes with a Synthetic RGD-Lipopeptide." <i>Chem. Eur. J.</i> Vol. 7, No. 5, pp. 1095-1101.	<input type="checkbox"/>
10	Blight, Andrew R. November 2002. "Miracles and Molecules—Progress in Spinal Cord Repair." <i>Nature Neuroscience Supplement</i> . Vol. 5, pp. 1051-1054.	<input type="checkbox"/>
11	Rodger, Alison, Jascindra Rajendra, Rachel Marrington, Malin Ardhammar, Bengt Norden, Jonathan D. Hirst, Andrew T. B. Gilbert, Timothy R. Dafforn, David J. Halsall, Cheryl A. Woolhead, Colin Robinson, Teresa J. T. Pinheiro, Jurate Kazlauskaitė, Mark Seymour, Niuvis Perez, and Michael J. Hannon. 2002. "Flow Oriented Linear Dichroism to Probe Protein Orientation in Membrane Environments." <i>Phys. Chem. Chem. Phys.</i> Vol. 4, pp. 4051-4057.	<input type="checkbox"/>
12	Silva, G. A., K. L. Kehl, K. L. Niece, and S. I. Stupp. May 4, 2003. "Nanoengineered Peptide Amphiphile Network for Photoreceptor Replacement in Degenerative Retinal Disorders." <i>Investigative Ophthalmology &amp; Visual Science</i> . Abstract No. 492 from Annual Meeting of the Association for Research in Vision and Ophthalmology.	<input type="checkbox"/>
13	Brandenburg, Klaus, Frauke Wagner, Mareike Muller, Holger Heine, Jorg Andra, Michel H. J. Koch, Ulrich Zahringner, and Ulrich Seydel. 2003. "Physicochemical Characterization and Biological Activity of a Glycoglycerolipid from <i>Mycoplasma fermentans</i> ." <i>Eur. J. Biochem.</i> Vol. 270, pp. 3271-3279.	<input type="checkbox"/>
14	Czeisler, C., V. M. Tysseling-Mattiace, G. A. Silva, S. I. Stupp, and J. A. Kessler. 2003. "Behavioral Improvement and Increased Survival Rate after Treatment with a Self Assembling Gel in a Rat Model of Spinal Cord Injury." 2003 Abstract Viewer/Itinerary Planner. Program No. 245.22. Washington, DC: Society for Neuroscience. Printed February 5, 2007. Page 1. <a href="http://sfn.scholarone.com/itin2003/main.html?new_page_id=126&amp;abstract_id=1554...">http://sfn.scholarone.com/itin2003/main.html?new_page_id=126&amp;abstract_id=1554...</a>	<input type="checkbox"/>

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15	Schmidt, Christine E. and Jennie Baier Leach. 2003. "Neural Tissue Engineering: Strategies for Repair and Regeneration." Annu. Rev. Biomed. Eng. Vol. 5, pp. 293-347.	<input type="checkbox"/>
16	t' Hart, Bert A. and Sandra Amor. 2003. "The Use of Animal Models to Investigate the Pathogenesis of Neuroinflammatory Disorders of the Central Nervous System." Current Opinion in Neurology. Vol. 16, pp. 375-383.	<input type="checkbox"/>
17	Beniash, Elia, Jeffery D. Hartgerink, Hannah Storrie, John C. Stendahl, and Samuel I. Stupp. 2005. "Self-Assembling Peptide Amphiphile Nanofiber Matrices for Cell Entrapment." Acta Biomaterialia. Vol. 1, pp. 387-397.	<input type="checkbox"/>
18	Hoke, Ahmet. August 2006. "Mechanisms of Disease: What Factors Limit the Success of Peripheral Nerve Regeneration in Humans?" Nature Clinical Practice Neurology. Vol. 2, No. 8, pp. 448-454.	<input type="checkbox"/>
19	Kokkoli, Efrosini, Anastasia Mardilovich, Alison Wedekind, Emilie L. Rexeisen, Ashish Garg, and Jennifer A. Craig. 2006. "Self-Assembly and Applications of Biomimetic and Bioactive Peptide-Amphiphiles." Soft Matter. Vol. 2, pp. 1015-1024.	<input type="checkbox"/>
20	The LabRat.com. 2007, updated. Hank's Buffered Salt Solution (HBSS) Recipe. <a href="http://www.thelabrat.com/protocolsHanks.shtml">http://www.thelabrat.com/protocolsHanks.shtml</a> . Printed January 19, 2007. Pages 1-2.	<input type="checkbox"/>

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